The 4 Horsemen of Smart City Solutions

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54% of the world's population today live in urban areas - an additional 2.5 billion people by 2050 will bring the proportion to 66% (*United Nations July 2014*). With 90% of these new additions concentrating in emerging Asia and Africa, building, organizing and providing infrastructures and services for the urbanised community will be an uphill task.

Driving the right plans and solutions, both greenfield and brownfield, will be one of the key challenges and technology is observed as a key solution. Gartner expects 1.6 billion devices to be connected to larger smart city infrastructures in 2016.

Surbana Jurong Addresses the Four Horsemen

At Surbana Jurong, our 50 years of track record in providing engineering and consulting services to the entire project lifecycle of the built environment, has proven that technology is impactful, but to only a section of the total urbanisation solution toolkit. Regardless of the city's state in the maturity cycle, all viable solutions need to address four areas namely security, sustainability, efficiency (of services and infrastructures) and community (feedback and engagement). The combination of good city management planning and smart technology will be able to address these challenges.

Smart City in a Box for Infrastructure Monitoring and Management

All developers, land equity investors to municipalities alike, have the same reservations as to why design did not plan for adequacy at inception or the critical fundamental to plan for interaction between communities and businesses in the same area.

Surbana Jurong's 'Smart City in a Box' concept works to build on the traditional urban master plans and embed the strategies and blueprints of how the planned physical infrastructure can be monitored and managed within the limits of acceptable operational efficiency, leveraging on latest yet simple technology solutions. A scalable and easily deployable (*thus in a box*) Infrastructure Monitoring and Management master plan is concocted to ensure all municipal systems rolled out are designed to address the four common concerns. It further adds a layer of non-geographical set of initiatives that describes how city-wide physical infrastructure networks are able to work seamlessly and coherently through a combination of networks and data to track operational abnormalities and monitor operational performance.

Image source: http://shutr.bz/lQTFMlJ

More Efficiency than Taxpayers' Money

The master plan further illustrates where abnormalities are detected, what the system would do to manage the system availability uptime and closes the service fulfilment cycle effectively. Our track record in managing and monitoring the municipal services of various townships has proven that timely reporting and monitoring of municipal services is the last mile to ensuring a 24/7 city.

Smart Security is the Priority

Security master planning and operations have continued to be integral in the day-to-day running of cities. An attack of the BlackEnergy malware on a harsh Ukrainian winter day of December 2015, knocked out Ukraine's power grid, leaving more than 200,000 people without power. We believe that cybersecurity is a non-negotiable factor in any city planning and will thus form a core part of our Smart City Solutions at Surbana Jurong.

Sustainability - Think Long Term

Generations will continue to live, work and play in cities. Facets of a smart city deal with issues such as how a city encourages more renewable sources of energy while dealing with issues of intermittency, control and capturing waste energy industriously and ensuring a reliable energy supply without over-burdening the infrastructure.

We believe feedback on both energy usage and the link between behaviour and energy usage is central to driving sustainability in the long term. Working with specialists in the field of sustainability, we aim to combine smart planning, monitoring and analytics to make cities sustainable and viable in the long run.

Community Engagement

With increasing information connectivity and population mobility, cities compete for talents and critical masses to maintain vibrancy and viability. Communities and businesses too, are expected to be involved in cityscape planning and its operations. Systems and infrastructures have to change with the needs of the people in order to remain relevant. It is in this spirit that Surbana Jurong's 'Smart City in a Box' solution is attentive to citizens' feedback and its very own 'Appstore for Smart City' solutions allows for easy plug-and-play 3rd party solutions. The focus on users' feedback and partnerships with the ecosystem will enable cities to remain responsive, while harnessing the creativity of the communities and ecosystems.